

REMARKS

Upon entry of the claim amendments, Claims 1-6 will be all the claims pending in the application.

Applicant has amended Claim 1 consistent with the description at the fourth and fifth full paragraphs of page 1 and the second and third full paragraphs of page 2. New Claims 5 and 6 are also consistent with this description.

The amendments to the specification are merely editorial in nature.

No new matter has been added.

Referring to the §112 and §101 rejections at Section Nos. 2-4 of the Action, it is believed that present Claims 1-6 fully comply with the requirements of §§ 101 and 112. In particular, Claim 4 positively recites "lodging at least one device as set forth in claim 1 inside a tube of said exchanger."

Referring to the §102 and §103 rejections at Section Nos. 5-8, Applicant respectfully traverses.

The ASM Handbook, or the prior art disclosed at pages 1 and 2 of the specification in view of the ASM Handbook, does not disclose or suggest the device of Claims 1-3 and 5-6 or the method of Claim 4.

The claimed device comprises a turbulence-generating element for use in at least one tube of a tubular heat exchanger. The claimed element comprises a specific alloy.

The claimed device is not a mere static part of a tube of a tubular heat exchanger. It is an additional element located in such a tube in order to reduce the fouling of this tube.

As recited in Claim 1, the claimed element is in the form of a solenoid. As recited in Claims 5 and 6, the solenoid may be an unstretchable solenoid or an elastic solenoid. For example, as further described at the fourth and fifth full paragraphs of page 1, the claimed element in the form of an unstretchable solenoid can be a metallic winding held in position in such a way that it can be driven in rotation by the liquid flowing in the exchanger. Further

description for the elastic solenoid of Claim 6 is provided in the second and third full paragraphs at page 2.

As recited in Claim 1, the liquid flowing in the exchanger is crude oil. For example, the crude oil can be crude oil having a low water content and containing mineral salts, among which chlorides, sulfide compounds such as hydrogen sulfide or thiols, and naphthenic acids, as described in the seventh full paragraph at page 1. These compounds have very corrosive properties with respect to turbulence-generating elements moving at various temperatures in crude oil, as described from the eighth full paragraph of page 1 through the paragraph bridging pages 1 and 2.

The ASM Handbook does not disclose (anticipate) the claimed turbulence-generating element, which is in the form of a solenoid and comprises a metallic alloy whose nickel content is greater than 50% by weight and includes at least one metal selected from the group consisting of chrome and molybdenum. The ASM Handbook also does not disclose the claimed method.

Furthermore, the prior art in view of the ASM Handbook does not suggest (render obvious) the claimed device or method. The ASM Handbook merely contains a brief reference to the use of Alloy 617 "for petrochemical processing." Applicant respectfully submits that conveying a crude oil in tubes of a heat exchanger has nothing to do with a petrochemical process.

For the foregoing reasons, Applicant respectfully requests that the Examiner reconsider and withdraw the §102 and §103 rejections.

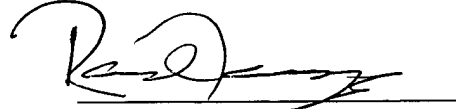
Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT

U.S. Appln. No. 10/058,102

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



L. Raul Tamayo

Registration No. 47,125

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: November 26, 2003